

"*only* a first insulating protective film for insulating and covering the metal wiring pattern and the through hole on the metal-wiring-pattern side . . . *no* insulating protective film other than said first insulating protective film covers the metal wiring pattern and the through hole on the metal wiring pattern side") represents "new matter" and was not in the application as originally filed. This rejection is respectfully traversed for at least the following reasons.

Fig. 1b, for example and without limitation, of the instant application as originally filed shows only protective film 30 covering lead 28 and through-hole 25 on the metal wiring pattern side. This is what applicant is claiming, and it cannot possibly represent "new matter" because it was in the application as originally filed. In addition, the instant specification explains at page 41, lines 19+, that "since the formation of the solder resist is made only once, the number of days in manufacturing the tape carrier 23 can be shortened by one day, as compared with the case in which the formation of solder resist is carried out twice. . . " (emphasis added). Thus, in addition to the drawings as filed, the text of the application as filed also emphasizes the advantage of providing only one protective film over lead 28 on the metal wiring pattern side. The application as filed clearly support this aspect of the instant claimed invention.

Claims 1, 2, 4, 6, 7, 9-11, 13, 15, 18 and 23 stand rejected under 35 U.S.C. Section 102(a) as being allegedly anticipated by the admitted prior art. Referring to Fig. 7a, the Office Action contends that "no insulating film other than [film 111] covers the metal wiring pattern and the through hole on the metal wiring patter side." This Section 102(a) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires, *inter alia*, "only a first insulating protective film for insulating and covering the metal wiring pattern and the through hole on the metal-wiring-pattern side, at locations over and proximate the through hole . . . wherein no insulating protective film other than said first insulating protective film covers the metal wiring pattern on the metal wiring pattern side proximate the through hole." In other words, as shown in Fig. 1(b) of the instant application, only solder resist film 30 covers the wiring pattern 28 on the metal-wiring-pattern side proximate or near through-hole 105. No other protective film is provided over wiring pattern 28 near through hole 25.

In direct contrast to the inventions of claims 1 and 10, prior art Figure 7 utilizes two solder resist films 110 and 111 to cover the wiring pattern proximate through hole 105. Thus, claim 1 cannot possibly be met by Figure 7. In fact, Figure 7 teaches directly away from the instant claimed invention by requiring two separate solder resist films. Moreover, the structure of Figure 7 is problematic because epoxy solder resist 110 is very hard (young's modulus of 380 kgf/mm²); thus rendering Fig. 7 inferior to the invention of claim 1 (i.e., resist 110 has a young's modulus much higher than the range required by claim 1). The problems with this are discussed at length in the instant specification. Citation to additional art cannot overcome the fundamental flaws associated with prior art Figure 7.

Claim 10 requires "only a first insulating protective film for insulating and covering the metal wiring pattern and the through hole on the metal-wiring-pattern side at locations over and proximate the through hole", and claim 23 requires that "no insulating solder resist other than said first insulating solder resist protective film covers the metal

wiring pattern near the through hole on the metal wiring pattern side." Again, Fig. 7 of the instant application teaches directly away from this by using both films 110 and 111 to cover metal wiring pattern near/proximate through hole 105.

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn and the application passed to issue. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (Amended) A tape carrier package semiconductor device, which has a tape carrier and semiconductor elements that have been packaged on the tape carrier, said tape carrier package semiconductor device comprising:

an insulating tape,

a metal wiring pattern installed on one surface of the insulating tape,

a through hole that is provided in a manner so as to penetrate the insulating tape so that the insulating tape is allowed to bend,

only a first insulating protective film for insulating and covering the metal wiring pattern and the through hole on the metal-wiring-pattern side, at locations over and proximate the through hole,

a second insulating protective film for insulating and covering the through hole on the side opposite to the metal-wiring-pattern side, and

resin sealing peripheral portions where the metal wiring pattern and a semiconductor element are connected;

wherein the first and second insulating protective films are made of solder resist whose young's modulus is in the range of 5 kgf/mm² to 70 kgf/mm², and wherein no insulating protective film other than said first insulating protective film covers the metal wiring pattern [and the through hole] on the metal wiring pattern side proximate the through hole.

10. (Amended) A liquid crystal panel display, which is provided with a liquid crystal panel and a tape carrier package semiconductor device having a tape carrier and semiconductor elements that have been packaged on the tape carrier so as to drive the liquid crystal panel, wherein said tape carrier comprises:

an insulating tape,

a metal wiring pattern installed on one surface of the insulating tape,

a through hole that is provided in a manner so as to penetrate the insulating tape so that the insulating tape is allowed to bend,

only a first insulating protective film for insulating and covering the metal wiring pattern and the through hole on the metal-wiring-pattern side at locations over and proximate the through hole,

a second insulating protective film for insulating and covering the through hole on the side opposite to the metal-wiring-pattern side, and

resin for sealing periphery portions at which the semiconductor device and the metal wiring pattern are connected,

wherein the first and second insulating protective films are made of solder resist whose young's modulus is in the range of 5 kgf/mm² to 70 kgf/mm², and only the first insulating protective film insulates and covers the metal wiring pattern [and] proximate the through hole on the metal wiring pattern side.

23. (Amended) A tape carrier package semiconductor device comprising:
an insulating tape,
a metal wiring pattern on one surface of the insulating tape,
a through hole provided in a manner so as to penetrate the insulating tape so that
the insulating tape is allowed to bend,

only a first insulating solder resist protective film for insulating and covering the
metal wiring pattern and the through hole on the metal-wiring-pattern side, and

a second insulating solder resist protective film for insulating and covering the
through hole on the side opposite to the metal-wiring-pattern side,

wherein the first and second insulating solder resist protective films are made of
solder resist whose young's modulus is in the range of 5 kgf/mm² to 70 kgf/mm², and no
insulating solder resist other than said first insulating solder resist protective film covers
the metal wiring pattern [and] near the through hole on the metal wiring pattern side.